



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

647.7812
Job Sheet 190595



Part No: 647.7812 Job Qty: 2 pcs
Part Name: Center Plate, Upper
Part Weight: 0 lbs Status: New Priority: Medium
Job Created: 2/11/19 Job Tracking No:
Due Date: 2/22/19 Created By: Marie Lajeunesse
Type: SOLD Description:
Note: DWG REV A IPP REV A RQ 14/1/07 VERIFIED BY DD
Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Bandsaw - 1	2 pcs	2/22/19	2/22/19	0.00	0.00	Bandsaw - 1		DSD A-02-05 19/04/05
110	HAAS 4 Axis - B4B	2 pcs	2/22/19	2/22/19	0.00	1.60	HAAS - 1 - B4B	DAS 52 9-89	
							HAAS - 2 - B4B		
							HAAS - 3 - B4B		
							HAAS - 4 - B4B		
120	QC 2	2 pcs	2/22/19	2/22/19	0.00	0.00	QC 2 - 1		
							QC 2 - 12		
							QC 2 - 14		
							QC 2 - 17		
							QC 2 - 19		
							QC 2 - 2		
							QC 2 - 20		
							QC 2 - 22		
							QC 2 - 23		
							QC 2 - 25		
							QC 2 - 32		
							QC 2 - 33		
							QC 2 - 35		
							QC 2 - 39		
							QC 2 - 4		
							QC 2 - 40		
							QC 2 - 44		
							QC 2 - 45		
							QC 2 - 48		
							QC 2 - 49		
							QC 2 - 50		
							QC 2 - 51	DAS 52 9-89	19/04/05
							QC 2 - 52		
							QC 2 - 54		
							QC 2 - 56		
							QC 2 - 57		



Container No: S156295
Part: 647.7812
Job No: 190595
Serial No/Batch: S156295
Revision:
Inspector:
Exp Date:
Instructions:
Date: 02/25/19

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaero.com

P.T.O.

NCR: 19-7247

130 QC 8	2 pcs	2/22/19	0.00 0.00	QC 2 - 62	
				QC 2 - 63	
				QC 2 - 8	
				QC 2 - 66	
				QC 2 - 64	
				QC 8 - 12	
				QC 8 - 14	
				QC 8 - 17	
				QC 8 - 20	
				QC 8 - 25	
				QC 8 - 3	
				QC 8 - 32	
				QC 8 - 33	
				QC 8 - 35	
				QC 8 - 39	
				QC 8 - 4	
				QC 8 - 44	
				QC 8 - 45	
				QC 8 - 49	cancel 19/04/20
				QC 8 - 58	
140 Outsource - 4 - Anodize	2 pcs	2/22/19	0.00 0.00	QC 8 - 8	
				QC 8 - 9	
150 Packaging 2-1 - Receive - B4B	2 pcs	2/22/19	0.00 0.00	QC 8 - 68	
				QC 8 - 67	
				QC 8 - 1 (A)	
				QC 8 - 47	
				ATG001-VC	5 04/24/2019 PC
				Packaging 2 - 1 - B4B	
				Packaging 2 - 2 - B4B	
				Packaging 2 - 3 - B4B	
				Packaging 2 - 5 - B4B	
				Packaging 2 - 4 - B4B	
				Packaging 2 - 6 - B4B	
				Packaging 2 - 7 - B4B	
				Packaging 2 - 8 - B4B	
				Packaging 2 - 9 - B4B	
				Packaging 2 - 10 - B4B	
				Packaging 2 - 11 - B4B	
				Packaging 2 - 12 - B4B	
				Packaging 2 - 13 - B4B	
				Packaging 2 - 14 - B4B	
				Packaging 2 - 15 - B4B	
				Packaging 2 - 16 - B4B	
				Packaging 2 - 17 - B4B	
				Packaging 2 - 18 - B4B	
				Packaging 2 - 19 - B4B	
				Packaging 2 - 20 - B4B	
				Packaging 2 - 21 - B4B	
				Packaging 2 - 22 - B4B	
				Packaging 2 - 23 - B4B	
				Packaging 2 - 24 - B4B	
				Packaging 2 - 25 - B4B	
				Packaging 2 - 26 - B4B	
				Packaging 2 - 27 - B4B	
				Packaging 2 - 28 - B4B	
				Packaging 2 - 29 - B4B	
				Packaging 2 - 30 - B4B	
				Packaging 2 - 31 - B4B	
				Packaging 2 - 32 - B4B	

7 pcs

MAY 21 2019

160 QC 6	2 pcs	2/22/19	0.00 0.00	Packaging 2 - 33 - B4B	
				Packaging 2 - 34 - B4B	
				Packaging 2 - 35 - B4B	
				Packaging 2 - 36 - B4B	
				QC 6 - 42	
				QC 6 - 9	
				QC 6 - 68	DAS
				QC 6 - 61	61
					9-89
180 Packaging 3-1 - Stock - B4B	2 pcs	2/22/19	0.00 0.00	Packaging 3 - 1 - B4B	
				Packaging 3 - 2 - B4B	
				Packaging 3 - 3 - B4B	
				Packaging 3 - 4 - B4B	
				Packaging 3 - 5 - B4B	
				Packaging 3 - 6 - B4B	
				Packaging 3 - 7 - B4B	
				Packaging 3 - 8 - B4B	
				Packaging 3 - 9 - B4B	
				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	
				Packaging 3 - 12 - B4B	
				Packaging 3 - 13 - B4B	
				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	PC CCR 1161
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
190 QC 21 - SA	2 pcs	2/22/19	0.00 0.00	QC 21 - SA - 21	
				QC 21 - SA - 70	DAS
				QC 21 - SA - 53	21

Part Op 100 - (Bandsaw) Cut Blank at 4.875"
Descriptions: 110 - (HAAS CNC Vertical Machine) 1-Machine per folio FB235 DWG REV: A FOLIO REV: AA 2-
deburr and break all sharp edges
120 - (QC2- Inspect parts off machine FAI/FAIB)
130 - (QC8- Inspect parts - second check)
140 - Issue P/O to ATG : 46043285 Hard Black Anodize and Prime Dwg 647.7800 Rev. A
150 - (Recelve & Inspect for Damage & Mat'l Certs)
160 - (QC6- All purchased or subcontracted products)
180 - ***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***
190 - (QC21- Final Inspection - Work Order Release)

Mat
used
3.281

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M7075T6B0.750X4.000	7075-T6 Bar 0.750" X 4.000" see matl	.8120 ft (.406 ea)	100-Bandsaw -	
M7075T6S0.750X4.000		3,248 ft	1	S104610

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Bandsaw - 1	M7075T6B0.750X4.000	1	0	0

Part Specifications

Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Center Plate Upper	1.000inches ± 0.005	1.005 0.995	1.000	
2	Center Plate Upper	3.000inches ± 0.005	3.005 2.995	3.000	
3	Center Plate Upper	1.160inches ± 0.005	1.165 1.155	1.160	
4	Center Plate Upper	3.171inches ± 0.005	3.176 3.166	3.170	
5	Center Plate Upper	3.072inches ± 0.005	3.077 3.067	3.072	
6	Center Plate Upper	0.231inches ± 0.005	0.236 0.226	0.232	
7	Center Plate Upper	0.375inches ± 0.002	0.377 0.373	0.375	
8	Center Plate Upper	96.500Degrees ± 0.500	97.000 96.000	96.5° Angle	
9	Center Plate Upper	6.500Degrees ± 0.500	7.000 6.000	6.5° Angle	
10	Center Plate Upper	39.600Degrees ± 0.500	40.100 39.100	39.6° Angle	
11	Center Plate Upper	0.325inches ± 0.005	0.330 0.320	0.325 Radius	
12	Center Plate Upper	0.125inches ± 0.005	0.130 0.120	0.125 Radius	
13	Center Plate Upper	0.177inches ± 0.005	0.182 0.172	0.177 Diameter	
14	Center Plate Upper	2.575inches ± 0.002	2.577 2.573	2.575	
15	Center Plate Upper	2.475inches ± 0.002	2.477 2.473	2.475	
16	Center Plate Upper	2.380inches ± 0.002	2.382 2.378	2.380	
17	Center Plate Upper	0.400inches ± 0.002	0.402 0.398	0.401	
18	Center Plate Upper	1.250inches ± 0.002	1.252 1.248	1.250	
19	Center Plate Upper	1.160inches ± 0.002	1.162 1.158	1.160	
20	Center Plate Upper	1.220inches ± 0.002	1.222 1.218	1.221	
21	Center Plate Upper	0.500inches ± 0.002	0.502 0.498	0.500	

Plex 2/11/19 2:44 PM Dart.lajeunesse.marie

mil
July 5, 2019

Entered: _____ Date: 19-02-25

NCR No. 19-7247

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

Route update only



Job: <u>190595</u>		DISPOSITION		DEPARTMENT/PROCESS				Engineering	
Part No. <u>647.7812</u>		Rework ☐ Scrap ☒ Use-as-is ☐		Skid-tube ☐ Machining ☒ Large Fab ☐		Cross tube ☐ Small Fab ☐ Finishing ☐		Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Water Jet ☐ Supplier ☐ Quality ☐	
Date: <u>19-02-25</u>	Sequence #: <u>110</u>	QTY Affected: <u>1</u>		MRB (QS1042) DAS 9 9-89 <u>19-02-25</u>					
Description Work Order Deviation		Disposition		Completed By DIP DOMINIC PARISIEN Lead hand / Supervisor <u>B.A 19-02-25</u>					
• Part thickness is under tolerance 0,375±,002" -> Part is 0,375 to 0,368"		Scrap destroy Replace <u>S104610</u>		QC / QA Coordinator DAS 68 9-89 FEB 25 2019					
• Machinist over torqued the part in second op.									
Root Cause		FAULT CATEGORY							
Operator ☒ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		Pressure/Forced Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Other/Details: _____		Contamination Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐		Power Loss/Surge Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐		Positioned Wrong Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread ☒	



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER POHB043285



Supplier: ATG001-VC
A.T.G. Industries Inc
731 INDUSTRIELLE ROAD
ROCKLAND
ON
K4K 1T2 Canada
Phone: 613-446-4544
Fax: 613-446-4556

Attention: Lalande, Marc-Andre

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: POHB043285
PO Date: 4/24/19
Due Date: 5/1/19
**Purchase Order
Revision:**
Revision Date:
Ship-To Contact: Phone:

Via: Ground
Pymt Terms: Net 30
Freight Terms:
Special Comments:

E-MAILED
2019-05-13

Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	190723	647.1512	Breakaway Tip (Outsource process-Anodize per QSI017 4.1.10.1) Issue P/O to ATG : 1- Black Anodize as per Dwg 647.1500 2- PRIME AS PER DWG, SEE NOTE #2 Certification of Conformity is required	Firmed	-	5/1/19	10 pcs	0 pcs	10 pcs	\$13.00/pcs	\$130.00
						10 X MAY 21 2019					
2	190722	647.1511	Lower Deflector (Outsource process-Anodize per QSI017 4.1.10.1) Issue P/O to ATG : Hard Anodize Color Black, Prime as per Dwg 647.1500 Rev. D.	Firmed	-	5/1/19	10 pcs	0 pcs	10 pcs	\$13.45/pcs	\$134.50
						10 X MAY 21 2019					
	192598			Firmed	-	5/1/19	2 pcs	0 pcs	2 pcs	\$13.45/pcs	\$26.90
						2 X MAY 21 2019					
Sub Total:							12	0	12		\$161.40
3	190595	647.7812	Center Plate, Upper Issue P/O to ATG : Hard Black Anodize and Prime Dwg 647.7800 Rev. A	Firmed	-	5/1/19	7 pcs	0 pcs	7 pcs	\$11.05/pcs DAS 61 9-89	\$77.35
						7 X MAY 21 2019					



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PURCHASE ORDER POHB043285



Items											
Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
4	192736	649.5214	Bracket Issue P/O to ATG: AS PER MPP-172 SECTION 2.1, HARD ANODIZE COLOR BLACK, PER IAW MIL-A-8625 TYPE 3 CLASS 2 AS PER MPP-172 SECTION 4.2, PRIME AS PER IAW MIL-PRF-23377 TYPE 1 CLASS N	Firmed	-	5/1/19	10 pcs	0 pcs	10 pcs	\$11.30/pcs	\$113.00
5	192694	649.5212	Bracket Issue P/O to ATG: AS PER MPP-172 SECTION 2.1, HARD ANODIZE COLOR BLACK, PER IAW MIL-A-8625 TYPE 3 CLASS 2 AS PER MPP-172 SECTION 4.2, PRIME AS PER IAW MIL-PRF-23377 TYPE 1 CLASS N	Firmed	-	5/1/19	10 pcs	0 pcs	10 pcs	\$11.30/pcs	\$113.00
6	192700	649.5113	Wiper Deflector Shim - Issue P/O to ATG : - Hard Anodize Black, Type 3, Class 2 as per Dwg. - Prime as per Dwg. Certification of Conformity is required.	Firmed	-	5/1/19	8 pcs	0 pcs	8 pcs	\$8.55/pcs	\$68.40
7	192695	649.5110	Wiper Deflector (Outsource process-Anodize per QSI017 4.1.10.1) Outsource process-Anodize per QSI017 4.1.10.1 Issue P/O to ATG : 1- Black Anodize as per Dwg 649.5100 2- PRIME AS PER DWG, SEE NOTE #2 Certification of Conformity is required	Firmed	-	5/1/19	10 pcs	0 pcs	10 pcs	\$10.85/pcs	\$108.50
Grand Total:											\$771.65



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PURCHASE ORDER POHB043285



Order Notes

Procurement Quality Clauses

A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 5/13/19 8:34 AM Dart.Guerin.Kimberley



A.T.G. Industries Inc.
760 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 917848

Date: 17-May-19

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Patrick Lussier
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
		ATG Delivery	
Quantity	Description		
	Please reference this document's Pack List number on all correspondences regarding this shipment. If you have any questions, please contact us.		
12 ea	Part: 647.1511 Lower Deflector Hard Black Anodize per MIL-A-8625F, Type III, Class2, .0005-.0045" (.5 - 4.5mils) Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0001-.0002" (1 - 2 mils) per drawing. Job: 24998 PO: POHB043285	Rev: D Line: 2	RECEIVED MAY 17 2019 DART AEROSPACE LTD.
7 ea	Part: 647.7812 Center Plate, Upper Hard Black Anodize per MIL-A-8625F, Type III, Class2, .0005-.0045" (.5 - 4.5mils) Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0006-.0009" (.6 - .9 mils) per drawing. Job: 24999 PO: POHB043285	Rev: A Line: 3	RECEIVED MAY 17 2019 DAS 61 9-89 DART AEROSPACE LTD.
8 ea	Part: 649.5113 Wiper Deflector Shim Hard Black Anodize per MIL-A-8625F, Type III, Class2, .0005-.0045" (.5 - 4.5mils) Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0001-.0002" (1 - 2 mils) per drawing. Job: 25002 PO: POHB043285	Rev: D Line: 6	RECEIVED MAY 17 2019 DART AEROSPACE LTD.
CERTIFICATE OF CONFORMANCE A.T.G Industries Inc. certifies that all items in this shipment conform to the requirements. Date: MAY 17 2019 Made in Canada.			



A.T.G. Industries Inc.
760 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 917848

Date: 17-May-19

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Patrick Lussier
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via
		ATG Delivery
Quantity	Description	
	Certified Signature: _____	
	Receiver Signature: _____	
	A.T.G Industries Inc. is AS9100 Registered and Nadcap Chemical Processing Accredited.	
	Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt.	
Made in Canada.		